
REPORT
ON
TOWN PLANNING SCHEME AT. BHATKAL.

Accompaniment to File no. 8672/36.
El. Br.

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SIR BRUCE WHITE, WOLFE BARRY & PARTNERS,

GROSVENOR GARDENS HOUSE,

35 GROSVENOR GARDENS,

LONDON. S W 1

NOVEMBER. 1946

SIR BRUCE WHITE, WOLFE BARRY & PARTNERS

INCORPORATING
WOLFE BARRY, ROBERT WHITE AND PARTNERS,
A. J. BARRY, COCHRANE & PARTNERS.

CONSULTING & CHARTERED CIVIL ENGINEERS

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REPORT ON TOWN PLAN

BHATKAL SHIPYARD

Contents.

Para 1.	General Note	page 1.
" 2.	Situation	" 1.
" 3.	Size	" 1.
" 4.	Distance from home to work	" 2.
" 5.	Aspect	" 2.
" 6.	Civic Centre	" 2.
" 7.	Community Centres	" 3.
" 8.	Density of housing and open spaces	" 3.
" 9.	Reservation of sites	" 3.
" 10.	Roads	" 4.
" 11.	Amenities,	" 5.
" 12.	Public Services	" 5.
" 13.	Railway	" 6.
" 14.	Limitations of this report	" 6.
" 15.	Summary	" 6.
<u>Table</u>	Cost of development	" 8.

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BHATKAL SHIPYARD
REPORT ON TOWN PLAN

1. General Note

The plan prepared has been drawn up from a Government of India Survey Sheet No. 48 J8 and 48 K9, scale 1" to 1 mile, and the layout shown must therefore be regarded as tentative only. A more detailed survey of the whole area will be necessary before final proposals can be prepared.

2. Situation

Bhatkal is situated on the west coast of India, at the southernmost point of the Bombay Presidency and is some 365 miles south of Bombay.

There is a north south road passing through it which follows the coastal strip between the Western Ghats and the sea, and which runs from Mangalore 86 miles away in the south, to Kavar 70 miles away in the north.

The nearest railway station is Talguppa, which is 54 miles distant, on the metre gauge system. The railway it is understood will be extended to Bhatkal in due course. The section leading down the Ghat will be difficult and it is not known when the railway will reach the town.

The site chosen, as shown on the accompanying map, lies immediately south of the mouth of the River Venkatapur.

3. Size

The plan covers an area of 2,000 acres (see the accompanying plan) and it is intended to house 4,000 shipyard workers - with a total population of about 20,000.

4. Distance from home to work

The distance from home to work has been kept as short as possible - a difficult matter as the shipyard is in a corner between the river and the sea.

(a) The manual labour has been placed nearest to the shipyard, the average distance is $1\frac{1}{2}$ miles and the maximum two miles.

(b) The skilled artisans are at an average distance of 2 miles and a maximum distance of $2\frac{1}{2}$ miles.

(c) The houses of the administrative grades are from $2\frac{1}{2}$ to 3 miles from the shipyard.

5. Aspect

The blocks of manual workers quarters have all been placed facing as nearly as possible west. This ensures that they gain all possible benefit from cool breezes blowing off the sea, that no rooms face south - only one quarter in ten has even an outside wall exposed to the south, and that the sunshine is at the back of the house in the morning and at the front in the evening.

In consequence of this insistence on aspect blocks of quarters show their backs to the road in some cases. This is the lesser of two evils, and skillful planting of trees and shrubs can easily redeem it.

The artisan and administrative grade quarters, being detached or semi-detached are in any case more easily ventilated. Aspect is not so important and they are generally sited to face the road.

6. Civic Centre

There is a civic centre for the town containing shops, market, post office, town hall, clinic, bus station, etc. These are grouped along a 200 ft wide main street. It is intended that the footpaths in front of the shops shall be 15' 0" wide and sheltered by an arcade. Outside this

is a space fifteen feet wide intended for the diagonal parking of cars, a carriageway 27 feet wide for three lines of traffic, and a space 23 feet wide planted with a line of trees under which tongas etc. can park. There is a central strip 70 feet wide to be planted with flowers and grass having a sunk water tank along the middle. Beyond this the pattern of 23 ft wide strip for trees, 27 ft carriageway and 15 ft parking strip is repeated.

This street begins at its lower end in a traffic circus round which are sited the market, bus station etc. It passes through a square in its centre portion, where the town hall and clinic are placed, and opens at the top on to a circular maidan two hundred yards in diameter round which are sited the Workers Institute, High School and Technical Institute, and where sites have been reserved for temples, mosque and church.

7. Community Centres.

There is a community centre within a thousand yards of any of the smaller houses. These centres have shops, a school, a tank, and a site for a temple or mosque. When a few trees have grown up round the tank it will become a social centre in the evening. Adequate open space is provided for children to play, for organised adult games, for a meeting or for an open air cinema.

8. Density of Housing and Open Spaces

Quarters for manual labour	- 8 per acre plus 33 per cent open spaces within community.
Artizan Quarters	- 4 per acre plus 15 per cent open spaces within community
Admin grades	- 1/2 to 2 per acre

The overall density of housing is about 2.25 per acre.

9. Reservation of Sites

Sites have been indicated for:

/(a)

- (a) Temples, mosques, church etc. firstly near the maidan, and secondly for one religious building at each community centre.
- (b) Burial grounds and burning ghats.
- (c) Hospital and clinic.
- (d) Club, with space for tennis, hockey, and cricket grounds, etc.
- (e) Slaughter houses; near market but well clear of houses.
- (f) Industrial establishments sited on the lower ground along the sea front.

Note Access must be left through the industrial area to suitable bathing beaches. Such access must not take the form of a narrow passage between buildings, a width of at least 200 ft should be left in order that there may be a 50' roadway bordered by cultivated land or non-industrial buildings (shops etc.)

10. Roads

The road system has been designed to provide access to all parts with the minimum area of paved road. Ample room has been provided to widen carriageways whenever the traffic will justify this. Paths are to be provided where the distance from houses to the shipyard etc can be shortened and the circumstances do not justify a road.

The through traffic routes do not pass through the civic centre. The community centres are sited away from the main internal traffic routes. As a result very few children need cross main roads on their way to school. The main north-south road along the coast passes across the site. The intention is to leave this entirely for through traffic, no buildings abut onto it, and the number of roads crossing it has been reduced to a minimum. An area about 200 ft wide has been reserved on the north side of the town as a possible site for rail connection and for a main road from the port.

Intersections of roads have been carefully arranged to minimise accidents due to careless driving. Important junctions have roundabouts. Where unimportant roads cross main roads the junctions are offset to prevent vehicles driving straight across the main road.

All roads should eventually be lined with trees.

11. Amenities

- (a) General provision of local open spaces between groups of houses.
- (b) Central maidan, with tank and fountain in the centre, and view down the central avenue.
- (c) In the civic centre there will be a continuous strip of garden down the central space between the two carriageways. Water from the fountains will cascade from tank to tank. These tanks will be quite shallow and inexpensive, but will give to all the inhabitants of the town some of the pleasure now available to those who live near the gardens of the Red Fort in Delhi or the Taj Mahal, at Agra.
- (d) Bathing beaches as indicated in para 7(f).
- (e) Space for games as noted in para 5 for community centres and para 7(d) for the club, space for playing fields has also been left near all schools, workers institute and technical institute.

12. Public Services

The source of water supply for the town is largely tied up with the hydro electric scheme. Depending on which scheme is adopted it will either be taken from the hydro electric reservoir, or else pumped from a suitable site on the River Venkatapur. In each case there will be a small storage reservoir (containing about seven days' supply) on high ground close to the town, with filter beds, chlorinating plant etc. Estimates are based on a supply of 50 gallons per head per day for domestic purposes.

/Electricity

Electricity supply for the town will be from whatever source is chosen to supply the shipyard.

Sewage is intended to be on the water carriage system. The site with gentle slopes towards the river and sea, facilitates this. The arrangement of the workers quarters will also make this feasible. The method to be adopted for sewage disposal will depend on a more detailed survey of the site, but will probably either be by using the sewage for irrigation on a sewage farm or by a direct outfall into the sea.

13. Railway

Space has been left for a branch railway to reach the shipyard either along the coastal strip from the south or along the left bank of the river from the east.

14. Limitations of this report

As the only information from which this report has been prepared is as stated in para.1 above, solely the one inch to one mile map, the whole layout must be regarded as merely a series of suggestions and entirely subject to detail survey of the site. Estimated costs have been put forward on the general basis of 100 per cent above pre-war costs and must be revised as soon as post-war prices for similar work are known.

15. Summary

The site reported on is eminently suited to be that of an attractive, pleasant and healthy town. There are no adverse features, such for example as rock to be removed, existing buildings in the way, difficulties in water supply or sewage disposal, difficult access or a cramped area. On the contrary there is ample space, the ground is sufficiently level but has just enough slope to

/assist

assist drainage, assist water supply and sewage disposal should both be cheap. The only argument which might be urged against it is that access is at present difficult. This is a matter which will be entirely changed by the early arrival of the railway and the construction of the jetty.

Suitable sites for industrial extension are available along the Venkatapur river and the coast. The town could be extended towards the south to about three times the size shown on the plan.

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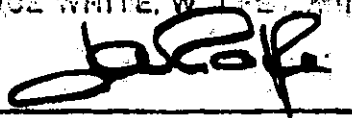
November, 1946.

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BHATKAL SHIPYARD - TOWN PLAN

Approximate cost of development

	Rs.	Rs.
Roads	24,00,000	
Stormwater Drains	5,70,000	
Sewers and Sewage disposal	12,00,000	
Water Distribution	5,30,000	
Amenities (layout of open spaces etc.)	3,00,000	
Contingencies and misc. charges	6,00,000	
<u>Total</u>	<u>56,00,000</u>	56,00,000

Housing for 400 families

Types of houses taken as in
proportion to income grades
in shipyard

85,00,000

Schools	1,95,000	
Technical Institute	90,000	
Workers Institute	1,05,000	
Hospital and Clinic	2,20,000	
<u>Total</u>	<u>6,10,000</u>	6,10,000

Preliminary survey and site
investigation

50,000

1,47,60,000

for cost of water supply scheme (excluding distribution).

see report on hydro electric scheme.

This estimate excludes the cost of land, and in view of post-war
variations in prices must be taken as approximate only.

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